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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/688,989	10/17/2000	Yoshitaka TSUNASHIMA	04329.1952-01000	2408

22852 7590 11/08/2002

FINNEGAN, HENDERSON, FARABOW, GARRETT &  
DUNNER LLP  
1300 I STREET, NW  
WASHINGTON, DC 20006

EXAMINER

RAO, SHRINIVAS H

ART UNIT	PAPER NUMBER
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2814

DATE MAILED: 11/08/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/688,989

Applicant(s)

TSUNASHIMA ET AL.

Examiner

Steven H. Rao

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 12 September 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☐ Claim(s) 27,28 and 30-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) 27,28,30-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

***Response to Amendment***

Applicants' amendment filed September 04, 2002 has been entered on September 11, 2002.

Therefore claims 27,28, 31 and 32 as recited in the amendment of March 11, 2002 and claim 30 as recited in the amendment of June 12, 2001 are currently pending in the application.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 27,28, 30 and 32 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Applicants' contention that the rejection of claim 27 in the previous Office Action fails to show a transistor without an insulation layer between itself and the semi conducting substrate on which it is formed can function as a transistor is maintained and made Final.

Applicants' contend that, " figures 10, 13 A-D and 20 B (related text on pages 32, -36,45 and 46) illustrates and describes two transistors which are connected by a sidewall."

However the rejection deals with the lack of an insulation layer between the gate and the semi conducting substrate ion which it is formed and how it can function as a transistor. Therefore it seems that applicants' response to the outstanding 112 , first paragraph rejection has not dealt with the issue of the rejection.

Therefore Applicants' arguments are not persuasive and the rejection is made Final.

Claims 28, 30-33 are also rejected at least for depending upon rejected claim 27.

The rejection of claims 27 and dependent claims 28, 30-33 in the previous Office Action based on the recitation, " a side wall of said first gate electrode at one end of a channel direction is connected to a sidewall of said second gate electrode at one end of the channel direction". is also maintained and made Final .

Applicants' argument that claim 27 is definite because it sets forth the location of the side wall ( i.e. One end of the channel) and the phrase when analyzed in light of the disclosure e.g. pages 32-38, 45 and 46 discloses an exemplary location of the sidewall.

Again the alleged location of the sidewall is not the issue, the rejection is based ( as previously stated ) on the ambiguity of not specifically reciting in the claims which channel direction the applicants' mean of the possible at least four) by reciting , " a side wall of said first gate electrode at one end of a channel direction is connected to a sidewall of said second gate electrode at one end of the channel direction " thus one cannot determine what direction is included/excluded .

With respect to claim 33 it recites the same claim language as claim 27 (above) and is rejected for the same reasons.

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However applicants' arguments that are similar to the arguments under claim 27 are not persuasive for the reasons set out above.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 27,28 30-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kume et al. (U.S. Patent No. 5,188,976, herein after Kume) and Tada (U.S. Patent NO. 5,497,021 herein after Tada) for reason previously stated and incorporated here by reference for the sake of brevity .

As stated in the previous Office Action Kume and Tada teach substantially the limitations presently recited . The response to applicants' arguments against the rejection is in the response to the arguments section below.

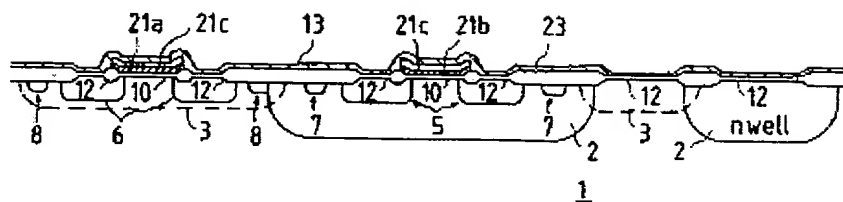
***Response to Arguments***

Applicant's arguments filed 09/12/2002 have been fully considered but they are not persuasive for reason set out below .

Applicants contend that Tada does not disclose/ suggest that the sidewalls of the gate electrodes are connected.

However Tada in Figure 3D shows element (21) connecting gate electrodes sidewalls 13 a and b. ( reproduced below).

FIG. 3(d)



Therefore contrary to applicants' contention all of the presently recited limitations of the claims, including sidewalls of the gate electrodes 13 a and 13 b are connected by element ( polysilicon layers) 21 a and 21 b ( col. 8 lines 1-11) is taught , (and to the extent understood " a sidewall of the first gate electrode at one end of a channel direction is connected to a side wall of said gate electrode at one end of the channel direction" ) by Kume and Tada and therefore prima facie obviousness has been established.

As the same references as previously applied are also used here this forms a separate basis for making this action Final.

Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven H. Rao whose telephone number is (703) 3065945. The examiner can normally be reached on 8.00 to 5.00.

The fax phone numbers for the organization where this application or proceeding is assigned are (703) 7463926 for regular communications and (703) 872-9319 for After Final communications.

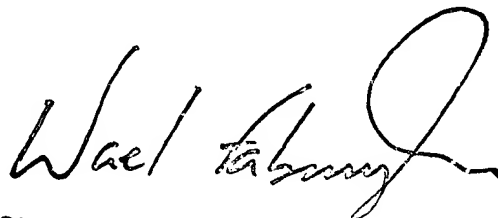
Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 3067722.



Steven H. Rao

Patent Examiner .

November 6, 2002



SUPERVISOR/PRIMARY EXAMINER  
TECHNOLOGY CENTER 2000